certainty of finding (within the limits of human fallibility) references to all new genera and species, and all important additions to the systematic knowledge of species already named and described. There can be very few serious workers in any branch of descriptive zoology, in any part of the world, who find it possible to carry on without at least occasional reference to its pages. There are, indeed, some minor blemishes and a few major ones apparent in the present volume that might be remedied without increasing its bulk, but there is no need to dwell on them here.

But if the "Systematic Index" sections of the "Record" do meet, more or less adequately, the needs of systematists, other zoologists are likely to find themselves bewildered if they look for guidance to the "Subject Index". In this index a uniform classification of the subject-matter in each of the divisions of the "Record" allotted to the major groups of the animal kingdom is obviously desirable. Yet in the present volume no such uniformity exists. Each recorder makes his own choice of categories under which the data are classified and the headings used for them. This haphazard arrangement of the Subject Index makes it of little use to zoologists engaged in branches of research other than systematics.

W. T. CALMAN.

THE SCIENCE OF CANNING

Canning Practice and Control

By Osman Jones and T. W. Jones. Second edition, revised and enlarged. Pp. xiv+311+107 plates. (London: Chapman and Hall, Ltd., 1941.) 32*s*. net.

THAT a second edition of this book has been found necessary in such a short time proves that it has fulfilled a definite purpose. There are not many authoritative books on canning—a section of the food industry which, although not new (for certain of Napoleon's armies were supplied with canned foods), has nevertheless only developed to its present huge proportions during the last forty years or so—and therefore a compilation by the two authors, both of whom have had considerable (practical and theoretical) experience, was received with pleasure by those interested in the application of science to the industry. There are many new features in the second edition, but one might have expected that certain aspects of the first edition would have been altered—as they could have been with profit to the book. The difficulty, as the reviewer sees it, was to do justice in some three hundred pages to the whole of the ground which the authors attempted to cover; a difficulty which has been experienced by many authors seeking to stress the scientific aspect of an industry whilst endeavouring to convey to the reader an appreciation of the 'practice' of the industry.

What, in effect, have the authors attempted to achieve? They have endeavoured to bring before their readers a practical treatise on canning and an authoritative text-book on the chemistry and bacteriology of canning, and, in the reviewer's opinion have only succeeded in drawing together from a scattered technical literature and from purely scientific papers, certainly reinforced by their own practical experience, a number of facts which are largely commonplace. If the experienced packer were faced by some out-of-the-ordinary problem, reference to this book would scarcely yield an answer. The whole trouble is that limitation of space results in a superficial treatment of the subject. The best practical chapter is that concerned with packing in glass, for the information on this aspect of 'canning' is notably meagre.

The same restriction has reduced the value of the scientific sections of the volume. The reader would naturally expect authoritative statements on tests to be carried out on the products being canned. The authors have chosen to detail, as an example, some thirty-five different methods of analysis in approximately twenty pages, with the obvious result that the instructions are sometimes incomplete, sometimes ambiguous and sometimes carelessly presented.

The bacteriological sections also suffer. The authors have considered it advisable to treat with some of the fundamentals of bacteriology, but they have also practical hints to give, methods of testing to describe, with the result that both theory and practice suffer. The chapter on the staining of micro-organisms is a good one and full of useful information.

Unfortunately the book reminds the reviewer of publications where the work of the authors has been marred by a too ambitious interpretation of their object.

This is the opinion of the reviewer, but he may be the only person in step in the battalion—a second edition has been found necessary.

L. H. LAMPITT.